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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/830,181	04/22/2004	Klaus-Dieter Nittel	NY-CHEMMT-206.1-Cont. US	7728
24972 7590 04/04/2007 FULBRIGHT & JAWORSKI, LLP 666 FIFTH AVE NEW YORK, NY 10103-3198			EXAMINER ZHENG, LOIS L	
			ART UNIT 1742	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/830,181

Applicant(s)

NITTEL ET AL.

Examiner

Lois Zheng

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Status of Claims

1. Claims 1-7 are canceled in view of the preliminary amendment filed 22 April 2004. New claims 8-16 are added in view of the preliminary amendment. Therefore, claims 8-16 are currently under examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 8-10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al. US 3,860,455(Hansen) in view of Clifford et al. US 2,375,468 (Clifford).

Hansen teaches a manganese phosphate coating method and composition, wherein the composition overlaps the composition instantly claimed, including the concentrations ranges of iron(II), manganese, phosphate, nitrate, wherein the free acid, total acid and S-value (ratio of free phosphate to total phosphate ions) are also overlapping, as recited in claims 8 and 10 (col. 2, lines 10-33). Hansen further teaches the addition of additional components, including nickel, in a range that overlaps the claimed range, as recited in claim 13 (col. 2, line 65 to col. 3, line 7).

However, Hansen does not explicitly teach the claimed nitroguanidine and its claimed concentration.

Clifford teaches that accelerators, such as nitroguanidine, accelerate the action of manganese phosphating conversion coating solutions "to so great an extent that it can be effected in the cold" (col. 2, lines 16-27, 48-51; Example 1).

Therefore, one of ordinary skill in the art would have found the invention to be obvious because one of ordinary skill in the art would have been motivated to add nitroguanidine to the coating solution of Hansen in order to accelerate the coating method and allow the coating to take place in a cold environment as taught in Clifford (col. 2, lines 48-51).

In addition, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the coating composition taught by the Hansen in view of Clifford overlaps that of the instant claims, In re Peterson, 65 USPQ2d 1379, In re Malagari, 182 USPQ 549, and MPEP 2144.05.

Regarding the claimed manganese phosphate thickness and average maximum roughness depth, since the coating thickness varies depending upon the length of the coating time and the coating time as taught by Hansen (col. 4 lines 54-57) overlaps the coating time as discussed in the instant specification. Therefore, one of ordinary skill in the art would have found the claimed coating thickness and the claimed average maximum roughness obvious since Hansen in view of Clifford teaches a coating process that uses a substantially the same coating solution for substantially the same period of time as the process disclosed in the instant invention.

4. Claim 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen in view of Clifford, and further in view of Bittner et al. 5,795,408 (Bittner).

The teachings of Hansen in view of Clifford are applied as set forth above in paragraph 3.

However, Hansen in view of Clifford do not explicitly teach the addition of the claimed complex-forming agent.

Bittner teaches the addition of complexing agents for the alloying constituents of steel, including citric acid, to phosphating solutions in order to stop or reduce the formation of sludge, while allowing the formation of a phosphate coating on a galvanized surface, as recited in claims 11-12 (col. 2, lines 35-44; col. 3, lines 36-45).

Therefore, one of ordinary skill in the art would have found the invention to be obvious because one of ordinary skill in the art would have been motivated to add a complexing agent, such as citric acid, to the composition of Hansen in view of Clifford in order to provide the desirable effect of stopping or reducing the formation of sludge, while allowing the formation of a phosphate film on the surface of a galvanized substrate, as recited in Bittner (col. 2, lines 35-44).

5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen in view of Clifford, and further in view of Oei et al. 4,824,490 (Oei).

The teachings of Hansen in view of Clifford are applied as set forth above in paragraph 3 above.

However, Hansen in view of Clifford do not explicitly teach the replacement of the manganese ions with manganese carbonate.

Oei teaches the use of manganese carbonate to control the concentration of free acid (col. 3, lines 4-8)

Therefore, one of ordinary skill in the art would have found the invention to be obvious because one of ordinary skill in the art would have been motivated to add manganese carbonate to the composition of Hansen in order to provide the desirable effect of controlling the concentration of free acid, as taught in Oei (col. 3, lines 4-6).

6. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen in view of Clifford, and further view of Shaw 2,987,427 (Shaw).

The teachings of Hansen in view of Clifford are applied as set forth above in paragraph 3 above.

However, Hansen in view of Clifford do not explicitly teach the step of subjecting the work pieces to sliding friction or the fabrication of the work pieces into axles, gear mechanisms and engine pistons.

Shaw teaches an example of a nitroguanidine manganese phosphate coated engine piston (i.e. a work piece subjected to sliding friction) (col. 5, lines 60-75; Example V). Shaw further teaches that the coating of the sliding work piece with manganese phosphate has the desirable effect of providing a wear resistant coating that liberates less sulphur dioxide and/or other chemicals (col. 1, lines 62-68):

Therefore, one of ordinary skill in the art would have found the invention to be obvious because one of ordinary skill in the art would have been motivated to subject the coated work piece to sliding friction or to fabricate the work piece into an engine piston because the use in said applications is known, as taught in Shaw and one of ordinary skill in the art would have been motivated to provide a sliding surface that

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liberates less sulphur dioxide and/or other chemicals, as taught in Shaw (col. 1, lines 62-67).

Response to Amendment

7. The Declaration filed under 37 CFR 1.132 filed 22 April 2004 is insufficient to overcome the rejection of claims 8-10 and 13 based upon Hensen in view of Clifford as set forth in the last Office action because:

Applicant's experimental data modeled after Example 1 of Clifford shows formation of coating after addition of 3g/l of nitroguanidine to a manganese phosphate containing solution (paragraph 10 on page 3 of the 1.132 declaration) at a temperature of 80°C comparing to no coating forming without the addition of nitroguanidine at the same temperature (paragraph 7 on page 2 of the 1.132 declaration). Although the resulting coating might not have sufficient anti-corrosive properties by applicant's standard. The benefit of adding nitroguanidine in a manganese phosphate coating solution (i.e. to accelerate the coating process) has been demonstrated.

In addition, the Clifford is incorporated into the rejection ground as a secondary reference for the teaching of nitroguanidine. Therefore, example 1 of Clifford is not considered closest prior art. Applicant has not provided sufficient factual data to demonstrate the criticality of the claimed ranges in the coating method.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hall et al. US 4,012,351 teaches that coating thickness depends upon how long the metal surface is being treated. The longer the metal surface is immersed in the coating solution, the thicker the coating becomes(col. 11 lines 37-39).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lois Zheng whose telephone number is (571) 272-1248. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LLZ

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10/13